

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1-22. (Cancelled)

23. (Currently amended) A method for identifying a compound that ~~modulates~~ induces cell cycle arrest, the method comprising the steps of:

(i) contacting the compound with a Fanconi anemia group A ~~protein~~ (FANCA) polypeptide with 95% identity to SEQ ID NO: 6, wherein inhibition of the FANCA polypeptide in a cell causes cell cycle arrest; and

(ii) determining the ~~physical~~ effect of the compound upon the FANCA polypeptide as compared to a control without the compound, thereby identifying a compound that ~~modulates~~ induces cell cycle arrest.

24-35. (Cancelled)

36. (Currently amended) The method of claim 23, wherein the ~~chemical or phenotypic~~ effect is determined by measuring aldehyde dehydrogenase activity.

37. (Currently amended) The method of claim 23, further comprising the step of determining the ~~chemical or phenotypic~~ effect of the compound upon a cell comprising the target FANCA polypeptide ~~or fragment thereof~~.

38. (Currently amended) The method of claim 37, wherein the ~~chemical or phenotypic~~ effect upon the cell is determined by measuring ~~cellular proliferation~~ cell cycle arrest.

39. (Currently amended) The method of claim 38, wherein ~~cellular proliferation~~ cell cycle arrest is measured by assaying DNA synthesis or fluorescent marker level.

40. (Previously presented) The method of claim 39, wherein DNA synthesis is measured by  $^3\text{H}$  thymidine incorporation, BrdU incorporation, or Hoescht staining.

41. (Previously presented) The method of claim 39, wherein the fluorescent marker is selected from the group consisting of a cell tracker dye or green fluorescent protein.

42. (Currently amended) The method of claim 37, wherein the ~~chemical or phenotypic effect of the compound upon the cell is activation of cell cycle arrest~~ FANCA polypeptide is SEQ ID NO:6.

43. (Currently amended) The method of claim 23, wherein the FANCA polypeptide is recombinant.

44. (Currently amended) The method of claim 23, wherein the FANCA polypeptide ~~is encoded by a nucleic acid comprising a sequence with 95% identity to SEQ ID NO:5~~ consists essentially of SEQ ID NO:6.